

STATE OF VERMONT
PUBLIC SERVICE BOARD

Docket No. 7624

Petition of Vermont Electric Cooperative, Inc.)
("VEC") for a Certificate of Public Good)
pursuant to 30 V.S.A. § 248(j), authorizing VEC)
to install 12.47 kV electrical components to)
support a generation upgrade by Great Bay)
Hydro Corporation in Charleston, Vermont)

Order entered: 9/22/2010

I. INTRODUCTION

This case involves a petition filed by Vermont Electric Cooperative, Inc. ("VEC") requesting a Certificate of Public Good ("CPG") pursuant to 30 V.S.A. § 248(j) to authorize VEC to install 12.47 kV electrical components to serve a generation upgrade by Great Bay Hydro Corporation ("Great Bay") in Charleston, Vermont (the "proposed project"). In today's Order, we conclude that the proposed project will be of limited size and scope; the petition does not raise a significant issue with respect to the substantive criteria of 30 V.S.A. § 248; the public interest is satisfied by the procedures authorized by 30 V.S.A. § 248(j); and the proposed project will promote the general good of the state.

II. PROCEDURAL HISTORY

On May 17, 2010, VEC filed a petition with the Public Service Board ("Board") requesting a CPG pursuant to 30 V.S.A. § 248(j) to install 12.47 kV electrical components necessary to serve a generation upgrade¹ by Great Bay in Charleston, Vermont. VEC submitted prefiled testimony, proposed findings, and a proposed order pursuant to the requirements of

1. Great Bay has received Federal Energy Regulatory Commission ("FERC") approval to re-power the West Charleston Development of the Clyde River Hydroelectric Project on the Clyde River in Charleston, Vermont ("West Charleston Hydro Project").

30 V.S.A. § 248(j).

On June 2, 2010, Elizabeth Lord, Esq., entered an appearance on behalf of the Agency of Natural Resources ("ANR").

Notice of the petition was sent on June 29, 2010, to all entities specified in 30 V.S.A. § 248(a)(4)(c) and other interested parties. The notice stated that any party wishing to submit comments as to whether the petition raises a significant issue with respect to the substantive criteria of 30 V.S.A. § 248 needed to file comments with the Board on or before July 30, 2010. A similar notice of the filing was published in the *Newport Daily Express* on July 2 and July 9, 2010, and the *Chronicle Newspaper* on July 7, 2010.

On July 30, 2010, the Department of Public Service ("Department") filed comments with the Board. With its comments the Department filed a determination pursuant to 30 V.S.A. § 202(f).

On August 18, 2010, the Clerk of the Board issued a memorandum requiring that VEC file additional information. The memorandum indicated that VEC's prefiled testimony did not adequately address the proposed project's potential impacts on shorelines.

On August 26, 2010, VEC filed supplemental testimony and exhibits.

III. FINDINGS

1. VEC is an electric cooperative as defined by Chapter 81 of Title 30, Vermont Statutes Annotated, and is a company as defined by 30 V.S.A. § 201. VEC's offices are located at 42 Wescom Road in Johnson, Vermont. Petition at 1.

2. Great Bay has received FERC approval to develop the West Charleston Hydro Project. The West Charleston Hydro Project is a Vermont Sustainably Priced Energy Enterprise Development ("SPEED") resource² and Great Bay has executed a Vermont SPEED Standard Offer Purchase Power Agreement with the SPEED Facilitator. Petition at 1; Denis pf. at 3.

2. A qualifying SPEED resource is a new renewable electric generating plant that has a contract to participate in the SPEED program. A "new" project means a project brought on-line after December 31, 2004. A SPEED project must use a technology that relies on a resource that is being consumed at a harvest rate at or below its natural regeneration rate. For more information about the SPEED program, visit the VermontSPEED website at <http://vermontspeed.com>.

3. VEC needs to install 12.47 kV electric components in order to serve the West Charleston Hydro Project. The components will connect the West Charleston Hydro Project to VEC's West Charleston substation. Petition at 1; Denis pf. at 3-4.

4. VEC plans to install one new wood riser pole near Great Bay's proposed new powerhouse on the east side of the Clyde River. The new riser pole will extend 38.5 feet above ground. The new riser pole will be supported by a guy and anchor. Petition at 1-2; Denis pf. at 4.

5. The new riser pole will have a primary metering package, a three-phase load-break disconnect switch, and three expulsion fuses. Petition at 2; Denis pf. at 4.

6. From the new riser pole on the east side of the river, VEC will string four new 12.47 kV conductors across the Clyde River to the west side, where the conductors will connect onto an existing VEC transmission pole ("Pole A"). Petition at 2; Denis pf. at 4, exh. VEC-DRD-1.

7. Pole A currently carries a 46 kV transmission line at the top and a 12.47 kV distribution circuit below. VEC will install a guy and push brace to support Pole A. Petition at 2; Denis pf. at 4.

8. VEC may need to clear a 50-foot right-of-way in the area around the new riser pole and the area on the west side of the Clyde River up to Pole A. Petition at 2; Denis pf. at 4.

9. From Pole A, VEC will string three new 12.47 kV conductors across the Clyde River to another existing transmission pole on the north-eastern side of the river, and on to a third existing pole ("Pole B"). The distance from Pole A to Pole B is approximately 1000 feet. Petition at 2; Denis pf. at 4; exh. VEC-DRD-1.

10. From Pole B, VEC will string four new 12.47 kV conductors across the West Charleston substation driveway to an existing VEC pole ("Pole C"). From Pole C the proposed project will use an existing connection to enter the substation on the unregulated-voltage side of the distribution bus. VEC plans to use an existing, second set of expulsion fuses for this connection. Petition at 2; Denis pf. at 4-5.

Orderly Development of the Region

[30 V.S.A. § 248(b)(1)]

11. The proposed project will not unduly interfere with the orderly development of the region, with due consideration having been given to the recommendations of the municipal and regional planning commissions, the recommendations of municipal legislative bodies, and the land conservation measures contained in the plan of any affected municipalities. This finding is supported by findings 12 and 13, below.

12. The Town of Charleston does not have a town plan or planning commission. The Town of Charleston Selectboard supports Board approval of the proposed project, and waived the 45-day advance-notice period under Board Rule 5.402(A). Exh. VEC-DRD-6 at 2.

13. The proposed project is consistent with the goals and recommendations of the Northeastern Vermont Development Association ("NVDA") regional plan. The NVDA supports Board approval of the proposed project, and waived the 45-day advance-notice period under Board Rule 5.402(A). Denis pf. at 7; exh. VEC-DRD-6 at 1.

Need for Present and Future Demand for Service

[30 V.S.A. § 248(b)(2)]

14. The proposed project is required to meet the need for present and future demand for service which could not otherwise be provided in a more cost effective manner through energy conservation programs and measures and energy-efficiency and load management measures. This finding is supported by finding 15, below.

15. In order to transmit power from the proposed West Charleston Hydro Project to VEC's distribution system, VEC must install the proposed project components near the West Charleston Hydro Project. Denis pf. at 3.

Discussion

The sole purpose of the proposed project is to interconnect a generating resource to the VEC distribution system; accordingly, demand-side alternatives will not displace the need for this project.

System Stability and Reliability

[30 V.S.A. § 248(b)(3)]

16. The proposed project will not adversely affect system stability and reliability. This finding is supported by findings 17 through 19, below.

17. A system impact study ("SIS") was performed for the West Charleston Hydro Project by Crocket Engineering and completed on March 20, 2009. The SIS concludes that the West Charleston Hydro Project will not adversely affect system stability and reliability provided that certain recommendations are followed. Denis pf. at 5.

18. The West Charleston Hydro Project SIS requires:

- a. A coordination study on the VEC distribution system and the Great Bay Hydro generating system to allow proper setting of the generator relays and the generator substation circuit recloser.
- b. Installation of a 12,470 volt wye/4,160 volt delta transformer as a generator step-up transformer, as proposed.
- c. Installation of a 12.5 kV breaker (recloser) at the VEC West Charleston substation to provide protection to the substation for faults on the generator feeder.
- d. Installation of a three-phase, gang-operated switch to provide a visual, lockable open point for substation and line maintenance.
- e. Provision of details of the generator harmonic output, which must meet Institute of Electrical and Electronic Engineers ("IEEE") 519-1992.
- f. Completion by Great Bay Hydro of the testing required by IEEE 1547, Section 5.

Exh. VEC-DRD-5 at 14.

19. The West Charleston Hydro Project, as designed, meets these recommendations. Denis pf. at 5-6; exh. VEC-DRD-5 at 3.

Discussion

We condition the CPG on VEC implementing all recommendations of the SIS pertaining to the VEC distribution system. Parties may seek reconsideration of this condition if they believe that system stability and reliability can be maintained by alternate means.

Economic Benefit to the State

[30 V.S.A. § 248(b)(4)]

20. The proposed project will result in an economic benefit to the state and its residents. This finding is supported by findings 21 and 22, below.

21. The proposed project is estimated to cost \$67,000, and all costs will be paid for by Great Bay. Denis pf. at 6.

22. The proposed project will contribute to the State meeting its energy and sustainability goals by transmitting renewable in-state generation to the distribution system. Denis pf. at 7, 14.

**Aesthetics, Historic Sites, Air and Water Purity,
the Natural Environment and Public Health and Safety**
[30 V.S.A. § 248(b)(5)]

23. The proposed project will not have an undue adverse effect on aesthetics, historic sites, air and water purity, the natural environment and public health and safety. This finding is supported by findings 24 through 50, below, which are the criteria specified in 10 V.S.A. §§ 1424a(d) and 6086(a)(1)-(8)(a) and (9)(k).

Outstanding Resource Waters
[10 V.S.A. § 1424a(d)]

24. The proposed project is not located on or near any Outstanding Resource Waters. Denis pf. at 8.

Water and Air Pollution
[10 V.S.A. § 6086(a)(1)]

25. The proposed project will not result in undue water or air pollution. This finding is supported by findings 26 through 38, below.

Headwaters
[10 V.S.A. § 6086(a)(1)(A)]

26. The proposed project is not located in headwaters of the State. Denis pf. at 9; exh. VEC-DRD-7 at 4.

Waste Disposal
[10 V.S.A. § 6086(a)(1)(B)]

27. The proposed project will not result in the injection of any harmful or hazardous substances into groundwater or wells. VEC will dispose of all construction debris in a state-approved landfill. Exh. VEC-DRD-7 at 4; Denis pf. at 10.

Water Conservation
[10 V.S.A. § 6086(a)(1)(C)]

28. The proposed project will not require any water, so water conservation will not be an issue. Exh. VEC-DRD-7 at 4; Denis pf. at 10.

Floodways
[10 V.S.A. § 6086(a)(1)(D)]

29. The proposed project is not located within the 100-year flood boundary or floodplain. The proposed project will not be located in the floodway of the Clyde River. Denis pf. at 10; exh. VEC-DRD-7 at 4.

Streams
[10 V.S.A. § 6086(a)(1)(E)]

30. The proposed project will not impact any streams. Exh. VEC-DRD-1.

Shorelines
[10 V.S.A. § 6086(a)(1)(F)]

31. The proposed project, with the conditions discussed below, will, insofar as possible, retain all shorelines and waters in their natural condition, allow continued access to the waters and the recreational opportunities provided by the waters, retain or provide vegetation which will screen the proposed project from the waters, and stabilize the bank from erosion, as necessary, with vegetation cover. This finding is supported by findings 32 through 36, below.

32. The proposed project will cross the Clyde River at two locations. The proposed new pole location is on the eastern bank of the Clyde River. Pole A is above the western bank of the Clyde River. The proposed push brace for Pole A is on the western bank. The river banks will not be disturbed by the installation of the new pole or by the pulling of the new wires across the river. Exhs. VEC-DRD-1; VEC-DRD-7; Denis pf. at 11.

33. Due to the steep slopes on either side of the Clyde River at the proposed project location, recreational access to the shoreline is most likely to occur from the river itself. Denis supplemental pf. at 4.

34. VEC plans to remove one yellow birch of approximately 16 inches in diameter and other small saplings and trees from the proposed 50-foot right-of-way on the west side of the Clyde River. Denis supplemental pf. at 3.

35. The VEC Vegetation Management Plan calls for retaining plant species that achieve a mature height of no more than 15 feet within the wire zone. The wire zone is the area encompassing 15 feet on either side of a power line. Plants of up to 30 feet in height may be retained outside of the wire zone toward the edge of the right-of-way depending on site conditions. Denis supplemental pf. at 4.

36. Any removal of trees and shrubs on the shoreline will leave the stumps and root systems in place. Denis supplemental pf. at 5.

Discussion

Pursuant to 10 V.S.A. § 6001(17), a shoreline is defined as follows:

"Shoreline" means the land adjacent to the waters of lakes, ponds, reservoirs and rivers. Shorelines shall include the land between the mean high water mark and the mean low water mark of such surface waters.

The Environmental Board has in previous rulings interpreted the statutory definition of a shoreline, and has determined that shorelines are not limited to the area located between the mean high water mark and the mean low water mark of such surface waters, but rather, may include lands that are adjacent to and a considerable distance from the water body itself. The Environmental Board has not established specific horizontal limits that define a shoreline, especially when considering river shorelines. *See Josiah E. Upton, Quiet River Campground, Land Use Permit #3W0819 (Revised)-EB, Docket #765, FCO of 5/18/01 at 15.*

We conclude that the proposed new pole on the eastern bank of the river, the proposed push brace on the western bank, and any clearing on either bank to establish the new right-of-way will occur within the shoreline.

Pursuant to 10 V.S.A. § 6086(a)(1)(F):

A permit will be granted whenever it is demonstrated by the applicant that, in addition to all other criteria, the development or subdivision of shorelines must of necessity be located on a shoreline in order to fulfill the purpose of the development

or subdivision, and the development or subdivision will, insofar as possible and reasonable in light of its purpose:

- (i) retain the shoreline and the waters in their natural condition;
- (ii) allow continued access to the waters and the recreational opportunities provided by the waters;
- (iii) retain or provide vegetation which will screen the development or subdivision from the waters; and
- (iv) stabilize the bank from erosion, as necessary, with vegetation cover.

No party has questioned whether the proposed project "must of necessity be located on a shoreline in order to fulfill the purpose" of the proposed project. The proposed project involves interconnecting a hydroelectric generating station on the Clyde River to the VEC system. The new conductors will be located within an existing right-of-way for the majority of their length. Siting the conductors on an alternate path away from the shorelines could have significant economic and environmental impacts. Accordingly, the necessity requirement of the statute has been met.

As to the environmental requirements of the subsection, the evidence indicates that the proposed project could have an adverse environmental impact if not properly mitigated. With respect to subcriterion (i) above, VEC's plan to leave in place the stumps and root systems of any cleared trees and shrubs will not retain the shoreline and the waters in their natural condition. The natural condition of the shoreline includes vegetation that provides shade for riparian wildlife. Stumps and roots will not provide this shade. We find that without proper mitigation the requirement to retain the shoreline and the waters in their natural condition will not be met. We therefore condition the CPG on VEC consulting with ANR to develop an ANR-approved plan that will satisfy the requirement of this subcriterion through vegetation retention or appropriate plantings.

With respect to subcriterion (ii) above, Finding 33 indicates that the steep slopes of the shoreline at the proposed project site make it an unlikely access point to the Clyde River. There is no evidence to suggest that there will be any change in access to the waters of the Clyde River. Accordingly, subcriterion (ii) has been met.

Regarding subcriterion (iii) above, VEC's plan to leave in place the stumps and root systems of any cleared trees and shrubs will not retain or provide vegetation which will screen

the development from the waters. The ANR-approved vegetation retention and planting plan mentioned above should, insofar as possible and reasonable, provide screening of the development from the waters, thus meeting the requirement of this subcriterion.

With respect to subcriterion (iv) above, VEC's plan to leave in place the stumps and root systems of any cleared trees and shrubs will provide short-term stability to the bank. Given the steep slopes of the shoreline, we find that a solution that will provide long-term stability and erosion prevention is necessary. The ANR-approved vegetation retention and planting plan mentioned above will meet the requirement of this subcriterion.

Wetlands

[10 V.S.A. § 6086(a)(1)(G)]

37. No wetlands are located in the proposed project area. Denis pf. at 11.

Air Pollution

[10 V.S.A. § 6086(a)(1)]

38. The installation and operation of the proposed project will not unduly impact air quality. Construction of the proposed project will create minimal, short-term impacts from the use of diesel- and gasoline-powered trucks. Operation of the proposed project will not produce air emissions. Denis pf. at 9.

Sufficiency of Water and Burden on Existing Water Supply

[10 V.S.A. §§ 6086(a)(2)&(3)]

39. The proposed project will have no impact on the existing water supply, as water is not required for construction or operation. Denis pf. at 12.

Soil Erosion

[10 V.S.A. § 6086(a)(4)]

40. The proposed project will not cause soil erosion. The installation of the new riser pole will require the disturbance of a small area around the base of the pole. This disturbed area will be stabilized immediately after the pole is installed. No other ground-disturbing activities are required. Exh. VEC-DRD-7 at 5-6.

Transportation Systems

[10 V.S.A. § 6086(a)(5)]

41. The proposed project will not have an adverse impact on traffic as construction of the proposed project will have only minor and temporary impacts on transportation along Route 105. Exh. VEC-DRD-7; Denis pf. at 12.

Educational Services

[10 V.S.A. § 6086(a)(6)]

42. The proposed project will not have any impact on educational services. Denis pf. at 12.

Municipal Services

[10 V.S.A. § 6086(a)(7)]

43. The proposed project will not have any impact on municipal services. Denis pf. at 12.

**Aesthetics, Historic Sites
and Rare and Irreplaceable Natural Areas**

[10 V.S.A. § 6086(a)(8)]

44. The proposed project will not have an undue adverse impact on the scenic or natural beauty, aesthetics, historic sites, or rare and irreplaceable natural areas. This finding is supported by findings 45 through 49, below.

45. The proposed new riser pole will extend 38.5 feet above ground and will be located on Great Bay property. The surrounding mature trees will screen the view of the pole except for a viewer looking directly down the proposed right-of-way. Exh. VEC-DRD-7 at 2-3.

46. The proposed new pole and lines will be viewed within the context of existing poles and powerlines. Exh. VEC-DRD-7 at 3.

47. The West Charleston Dam and the existing powerhouse located north of the VEC West Charleston substation are eligible for listing on the National Register of Historic Places. The installation of new conductors on existing poles will not change the historic character of the area. Exh. VEC-DRD-7 at 3.

48. An Archaeological Resource Assessment was performed for the West Charleston Hydro Project. This assessment did not identify any archaeologically sensitive areas in the vicinity of the proposed project. The Division for Historic Preservation has reviewed the proposed project and concluded that it will have no effect on any historic sites that are eligible for the State Register of Historic Places. Exh. VEC-DRD-7 at 3-4 and Attachment 1.

49. The Environmental Assessment prepared for the West Charleston Hydro Project's FERC license application addressed the proposed new riser-pole location and found no adverse impacts to rare and irreplaceable natural areas, necessary wildlife habitat, or rare, threatened, or endangered species. Exh. VEC-DRD-7 at 6 and Attachment 2.

Development Affecting Public Investments

[10 V.S.A. § 6086(a)(9)(K)]

50. The proposed project will not affect public investments. The proposed new riser pole will be on property owned by Great Bay. The proposed new wires will be carried on existing poles that already carry wires, and will cross two public roads. Exh. VEC-DRD-7 at 2, 6.

Public Health and Safety

[30 V.S.A. § 248(b)(5)]

51. The proposed project will not adversely impact public health and safety. The proposed project has been designed in accordance with National Electric Safety Code requirements. VEC

will use high-quality materials and adhere to prudent utility construction practices. Denis pf. at 13-14.

Least-Cost Integrated Resource Plan

[30 V.S.A. § 248(b)(6)]

52. The proposed project is consistent with VEC's integrated resource plan's goal of employing renewable energy resources. Denis pf. at 14.

Compliance with Electric Energy Plan

[30 V.S.A. § 248(b)(7)]

53. The Department has determined that the proposed project is consistent with the *Vermont Twenty-Year Electric Plan*, in accordance with 30 V.S.A. § 202(f), provided that the proposed project is constructed as described in the petition. Letter from Geoffrey Commons, Esq., to Susan M. Hudson, Clerk of the Board, dated July 30, 2010, at 1 and Attachment.

Outstanding Resource Waters

[30 V.S.A. § 248(b)(8)]

54. The proposed project is not located on or near any outstanding resource waters. Denis pf. at 8.

Existing or Planned Transmission Facilities

[30 V.S.A. § 248(b)(10)]

55. The proposed project can be served economically by existing or planned transmission facilities without undue adverse effect on Vermont utilities or customers. This finding is supported by findings 56 through 59, below.

56. The proposed project, while dealing with electric components typical of distribution projects, will be a transmission facility pursuant to the Board's General Order 51 because the primary purpose of the proposed project is to deliver electric power in bulk from a generating facility to VEC's distribution system. Denis pf. at 2; PSB General Order No. 51.

57. The proposed project will use existing VEC transmission poles and existing substation connections and fuses. Denis pf. at 4-5.

58. The proposed project has been designed to avoid undue adverse impacts to VEC's utility workers. Denis pf. at 15.

59. The proposed project will be paid for by Great Bay. Denis pf. at 6.

IV. CONCLUSION

Based upon all of the above evidence, we conclude that the proposed project will be of limited size and scope; the petition does not raise a significant issue with respect to the substantive criteria of 30 V.S.A. § 248; the public interest is satisfied by the procedures authorized by 30 V.S.A. § 248(j); and the proposed project will promote the general good of the state.

V. ORDER

IT IS HEREBY ORDERED, ADJUDGED AND DECREED by the Public Service Board ("Board") of the State of Vermont that:

1. The proposed project of Vermont Electric Cooperative, Inc., to install 12.47 kV electrical components to support a generation upgrade by Great Bay Hydro Corporation in Charleston, Vermont, will promote the general good of the State of Vermont in accordance with 30 V.S.A. Section 248, and a certificate of public good to that effect shall be issued.

2. Construction, operation, and maintenance of the proposed project shall be in accordance with the plans and evidence as submitted in this proceeding. Any material deviation from these plans must be approved by the Board.

3. Vermont Electric Cooperative, Inc. shall implement all recommendations of the system impact study related to its distribution system to ensure that system stability and reliability are not adversely impacted by the interconnection to the West Charleston Hydro Project.

4. Prior to commencing construction, Vermont Electric Cooperative, Inc. shall consult with the Agency of Natural Resources to develop a plan for appropriate vegetation retention or

plantings in the proposed right-of-way on the shorelines of the Clyde River, and shall provide the Board with a determination from the Agency of Natural Resources that this plan will, insofar as possible, retain the shoreline in its natural condition, provide screening of the development from the waters of the Clyde River, and stabilize the bank from erosion.

Dated at Montpelier, Vermont, this 22nd day of September, 2010.

<u>s/ James Volz</u>)	
)	PUBLIC SERVICE
)	
<u>s/ David C. Coen</u>)	BOARD
)	
)	OF VERMONT
<u>s/ John D. Burke</u>)	

OFFICE OF THE CLERK

FILED: September 22, 2010

ATTEST: s/ Susan M. Hudson
Clerk of the Board

NOTICE TO READERS: This decision is subject to revision of technical errors. Readers are requested to notify the Clerk of the Board (by e-mail, telephone, or in writing) of any apparent errors, in order that any necessary corrections may be made. (E-mail address: psb.clerk@state.vt.us)

Appeal of this decision to the Supreme Court of Vermont must be filed with the Clerk of the Board within thirty days. Appeal will not stay the effect of this Order, absent further Order by this Board or appropriate action by the Supreme Court of Vermont. Motions for reconsideration or stay, if any, must be filed with the Clerk of the Board within ten days of the date of this decision and order.